



Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272  
 Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

## DARLINGTON TRANSISTOR MODULES (Continued)

Major Ratings and Characteristics at  $T_C = 25^\circ\text{C}$  ( $T_J$  Maximum =  $150^\circ\text{C}$ )

MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS				
Transistors							Diodes		Transistors		
Type	$V_{CE0}$ (SUS) Volts	$V_{CEV}$ Volts	Continuous $I_C$ Amperes	Continuous $I_B$ Amperes	$P_T$ Watts	$V_{RMS}$ Isolation Volts	$I_{FM}$ Amperes	$I_{FSM}$ Amperes	Test Conditions		
									$I_C$ Amperes	$V_{CE}$ Volts	$h_{FE}$ Minimum

### Non-Isolated Darlington Transistor Modules

KSC23010	300	350	100	3	415	—	100	1000	100	2	100
KSB23020	300	350	200	6	830	—	200	2000	200	2	100
KSB23030	300	350	300	10	1250	—	300	3000	300	2	100
KSB13060	300	350	600	15	2080	—	—	—	600	2	500

### Fast Switching Darlington Transistor Modules

KSA21K03	1000	1600	30	2	310	—	30	300	30	5	75
KSF24505	450	850	50	3	160	1500	30	300	50	5	100

### Chopper Darlington Transistor Modules

KQ224503	450	600	30	1.8	250	2500	30	300	30	5	100
KR224503	450	600	30	1.8	250	2500	30	300	30	5	100
KR221K03	850	1000	30	2	312	2500	30	300	30	5	100
KQ224505	450	600	50	3	312	2500	50	500	50	5	100
KR224505	450	600	50	3	312	2500	50	500	50	5	100
KQ221K05	850	1000	50	3	400	2500	50	500	50	5	100
KR221K05	850	1000	50	3	400	2500	50	500	50	5	100
KQ224575	450	600	75	4.5	355	2500	75	750	75	5	100
KR224575	450	600	75	4.5	355	2500	75	750	75	5	100
KQ221K75	850	1000	75	4	500	2500	75	750	75	5	100
KR221K75	850	1000	75	4	500	2500	75	750	75	5	100
QM100E2Y-HK	450	600	100	6	620	2500	100	1000	100	2	75
QM100E3Y-HK	450	600	100	6	620	2500	100	1000	100	2	75
QM100E2Y-2HK	850	1000	100	5	800	2500	100	1000	100	2.8	75
QM100E3Y-2HK	850	1000	100	5	800	2500	100	1000	100	2.8	75
QM150E2Y-HK	450	600	150	9	690	2500	150	1500	150	2	75
QM150E3Y-HK	450	600	150	9	690	2500	150	1500	150	2	75
QM150E2Y-2HK	850	1000	150	8	1000	2500	150	1500	150	5	100
QM150E3Y-2HK	850	1000	150	8	1000	2500	150	1500	150	5	100

										THERMAL AND MECHANICAL CHARACTERISTICS				
Test Conditions			Resistive Load Switching Times			Diodes		Interface Per Module	Transistors	Diodes	Weight	Outline Drawings		
I <sub>C</sub> Amperes	I <sub>B</sub> Amperes	V <sub>CE (SAT)</sub> Volts	t <sub>on</sub> μs	t <sub>s</sub> μs	t <sub>f</sub> μs	I <sub>FM</sub> Amperes	V <sub>FM</sub> Volts	R <sub>θCS</sub> °C/W	R <sub>θJC</sub> °C/W	R <sub>θJC</sub> °C/W	Grams	Number	Page	
100	1	2	2	10	3	100	1.5	0.35	0.3	0.5	87	16	37	
200	2	2	2.5	10	3	200	1.5	0.07	0.15	0.25	200	17	37	
300	3	2	2	10	3	300	1.85	0.04	0.1	0.25	400	18	37	
600	1.2	2	3	15	3	—	—	0.05	0.06	—	400	19	38	
30	2	2	4	5	3	30	1.5	—	0.4	0.8	50	20	38	
50	1	2	2	5	2	30	1.8	—	0.8	1.2	35	21	38	
30	0.4	2	1.5	12	3	30	1.85	0.15	0.5	2	200	22	39	
30	0.4	2	1.5	12	3	30	1.85	0.15	0.5	2	200	23	39	
30	0.6	2.5	2.5	15	3	30	1.8	0.15	0.4	1.5	200	25	40	
50	0.65	2	1.5	12	3	50	1.75	0.15	0.4	1.3	200	22	39	
50	0.65	2	1.5	12	3	50	1.75	0.15	0.4	1.3	200	23	39	
50	1	2.5	2.5	15	3	50	1.8	0.15	0.31	1.2	200	24	39	
50	1	2.5	2.5	15	3	50	1.8	0.15	0.31	1.2	200	25	40	
75	1	2	2.5	12	3	75	1.85	0.15	0.35	1.3	200	22	39	
75	1	2	2.5	12	3	75	1.85	0.15	0.35	1.3	200	23	39	
75	1.5	2.5	2.5	15	3	75	1.8	0.13	0.25	1.2	250	26	40	
75	1.5	2.5	2.5	15	3	75	1.8	0.13	0.25	1.2	250	27	40	
100	1.3	2	2	12	3	100	1.75	0.1	0.2	0.65	420	29	41	
100	1.3	2	2	12	3	100	1.75	0.1	0.2	0.65	420	28	41	
100	2	2.5	3	15	3	100	1.8	0.075	0.155	0.65	470	31	42	
100	2	2.5	3	15	3	100	1.8	0.075	0.155	0.65	470	30	41	
150	2	2	2.5	12	3	150	1.85	0.1	0.18	0.6	420	29	41	
150	2	2	2.5	12	3	150	1.85	0.1	0.18	0.6	420	28	41	
150	2	2.5	3	15	3	150	1.8	0.75	0.125	0.6	470	31	42	
150	2	2.5	3	15	3	150	1.8	0.75	0.125	0.6	470	30	41	